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JAN 2 1 2004

Mr. Gene Jablonowski, Remedial Project Manager
United States Environmental Protection Agency
Region V, SR-6J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

DOE-0103-04

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911

Dear Mr. Jablonowski and Mr. Schneider:

SILO 3 REMEDIAL DESIGN/REMEDIAL ACTION PACKAGE, REVISION 2

References:
1. DOE letter, DOE-0005-04, G. Griffiths to G. Jablonowski and T. Schneider, "Transmittal of Revised Silo 3 Remedial Design /Remedial Action Package," dated October 3, 2003
2. Letter, G. Jablonowski to G. Griffiths, "Revised Silo 3 remedial Design, Remedial Action Package," dated November 21, 2003
3. Letter, T. A. Schneider to G. Griffiths, "Re: Comments – Silo 3 remedial Design/Remedial Action Package," dated November 25, 2003

Enclosed you will find the following information, which has been prepared in response to the comments from the United States Environmental Protection Agency (USEPA) and the Ohio Environmental Protection Agency (OEPA) on the Remedial Design/Remedial Action (RD/RA) Package for the Silo 3 Project (see References 2 and 3):

1. Response to Comments document addressing comments from the USEPA and OEPA on the Revision 1 of the Silo 3 RD/RA Package,
2. Revised introduction section of the RD/RA Package, incorporating the revisions noted in the Response to Comments, and

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3. Copies of photographs of the excavator to be utilized for mechanical retrieval of the Silo 3 material.

If you have any questions or comments regarding the enclosed, please contact John Sattler at (513) 648-3145.

Sincerely,

William J. Taylor
Director

FCP:Sattler

Enclosure: As Stated

cc w/enclosure:
G. Brown, OH/FCP
J. Sattler, OH/FCP
J. Saric, USEPA-V, SR-6J
T. Schneider, OEPA-Dayton (three copies of enclosure)
M. Cullerton, Tetra Tech
M. Shupe, HSI GeoTrans
R. Vandegrift, ODH
AR Coordinator, Fluor Fernald, Inc./MS78

cc w/o enclosure:
K. Johnson, OH/FCP
S. Beckman, Fluor Fernald, Inc./MS52-4
D. Carr, Fluor Fernald, Inc./MS1
R. Corradi, Fluor Fernald, Inc./MS52-4
T. Hagen, Fluor Fernald, Inc./MS1
M. Jewett, Fluor Fernald, Inc./MS52-5
D. Nixon, Fluor Fernald, Inc./MS65-2
D. Thiel, Fluor Fernald, Inc./MS52-2
T. Walsh, Fluor Fernald, Inc./MS52-3
ECDC, Fluor Fernald, Inc./MS52-7

RESPONSES TO COMMENTS ON REVISED SILO 3 REMEDIAL DESIGN/REMEDIAL ACTION PACKAGE

U.S.EPA COMMENTS

General Comments

1. Commenting Organization: U.S. EPA Commentor: Jablonowski
Section #: Not Applicable (NA) Page #: NA Line #: NA
Original General Comment #: 1
Comment: The process vent system (system 19) described in Section 4.0 of the process control plan will use a number of manual dampers to control airflow. The system will basically rely on the operator to make most of the airflow adjustments. Typically, in a system where specific pressures must be maintained, it is difficult to control the airflow with manually operated dampers and constant-speed fans. Because the pressure drops across air filters in the process vent system will change because of increased filter loading (clogging), humidity fluctuations, and varying inflow rates, it may be very difficult (or impossible) to maintain control over the air flow rates. The text does not state how these flow rates will be measured or adjusted. The document should be revised to discuss this issue.

Response: The sequence of operation, and controls, for the HVAC system is detailed on Drawing 94X-3900-H-01726 in the RD/RA Package. The Process Vent System (PVS) dampers will be setup for pneumatic retrieval operations prior to the silo sidewall opening and again for manual and/or pneumatic operations with the sidewall opening. The need to make adjustments of dampers after these initial setups is expected to be infrequent. The PVS adjustments for operations with the sidewall opening will be made within the Excavator Room and on the silo dome (PVS and associated supply air). There are flow indicators on the PVS ducts to determine the air flow rates from all sources and make the associated damper adjustments. Furthermore, the pressure within the Excavator Room and other areas is maintained by automatic modulation of the HVAC supply airflow (i.e., area ventilation and pressure is not entirely manually controlled).

Action: No change required

2. Commenting Organization: U.S. EPA Commentor: Jablonowski
Section #: NA Page #: NA Line #: NA
Original General Comment #: 2
Comment: The text does not specify how long it will take to (1) load the cargo containers and (2) remove the loaded cargo containers from the site. Also, the disposal facility for Silo 3 material is not indicated, and the means of transporting the loaded containers is not described. While a subsequent separate Silo 3 Transportation and Disposal Plan should clarify these issues, the text should be revised to include this information especially if the disposal site has already been determined.

Response: According to the current design and baseline operating schedule, a total of approximately 1910 soft-sided packages will be filled at an average rate of 15 packages

per day, assuming 123 days of operation at 63% availability. The current Silo 3 project baseline assumes that the Silo 3 material will be transported by direct truck to the NTS for disposal. The current packaging and transportation approach assumes that the soft-sided packages will be placed on pallets and loaded directly into enclosed truck trailers with the load secured in accordance with DOT regulations, rather than being loaded into cargo containers. The baseline assumes eight soft-sided packages will be loaded into each enclosed truck trailer, with approximately 239 total shipments over a five-month period. Each trailer should be shipped offsite less than one week after loading. Transportation and disposal of Silo 3 material will be specified in detail in the Transportation and Disposal plan submitted in accordance with Section 4 of the RD/RA Package.

Action: The above text describing the current baseline approach for transportation and disposal has been added to Section 4 of the RD/RA Package Introduction.

3. Commenting Organization: U.S. EPA Commentor: Jablonowski
Section #: NA Page #: NA Line #: NA
Original General Comment #: 3
Comment: The text does not address the possibility of the loaded bulk bags being damaged during loading, transport, or unloading. If these bags will be transported by truck, their contents could be spilled on the roadway during an accident. The text should be revised to address this issue.

Response: The design of the soft-sided package meets Department of Transportation (DOT) Industrial Package Type 2 (IP-2) requirements. The package has been tested and successfully passed all tests required by DOT regulations for an IP-2 package (i.e., free drop test, stacking test, and vibration test.)

As detailed in the Revised Proposed Plan for Silo 3 (40430-RP-0014, April 2003) the Fernald site employs controls during each truck shipment to minimize the risk of an accident, and to ensure rapid response should one occur. For truck shipments to the NTS, the controls include: 1) a rigorous quality control and assurance program to ensure the quality of the packages and the conveyances and their compliance with DOT and NTS requirements; 2) affixing a global positioning system transponder to each conveyance to track the progress of each vehicle and/or ensuring that each driver has a working cellular phone or two-way radio; 3) employing screening criteria for the selection of drivers; 4) training of drivers in the appropriate actions to be taken in response to an accident; and 5) briefing interested emergency response personnel along transportation routes.

The transportation risk evaluation conducted in support of the Revised PP for Silo 3 included evaluation of the risk to the public during both accident free and accident scenarios (including release from a damaged container) during truck transportation of Silo 3 material to the NTS. The analysis demonstrated risk within applicable guidelines for all scenarios.
Action: The above text has been added to Section 4.1 of the RD/RA Package Introduction.

4. Commenting Organization: U.S. EPA Commentor: Jablonowski
Section #: 5.3 of Process Control Plan for Silo 3 Project
Page #: 5-4 Line #: NA
Original General Comment #: 4
Comment: The text states that "for each full container, the control system archives a unique identifier (UNID), time and date of filling, weight data, and analytical data (if any)." This statement implies that the bags must be stored somewhere until the analytical data is available. It is not clear how long the bags will have to be stored. Also, the text states that bags will be labeled after being transported to the Cargo Container Bay (see Section 3.7 of the process description for Silo 3 project); however, the text does not state whether this labeling will be done before or after analytical data is obtained. Additionally, Section 3.7 of the process description for the Silo 3 project does not state whether the labels will include the analytical data. The text should be revised to clearly state when the stored bags will be moved. Also, the text should be revised to clarify whether analytical data will be included on the bags' labels.

Response: Immediately after filling each container, the control system will archive the UNID (inventory number), time and date of filling, weight data, additive data , and other operational data. After the container is closed and moved to the Cargo Container Bay, pertinent radiological data will be collected via contact and one meter dose rate surveys and archived by the control system thus completing data acquisition for that container. Once data acquisition is complete, the data set is transferred to FCP's Site-wide Waste Information Forecasting and Tracking System (SWIFTS). In SWIFTS the raw data for that container will be immediately converted through validated software to data used for determining compliance with the Silo 3, NTS waste profile as well as for DOT and NTS labeling purposes. Following verification that the waste meets the NTS profile, labels will be generated and applied to the container. These include: (1) the DOT Radioactive Label that will show the 95% radionuclide contributors, the individual package activity, and the transport index; (2) the NTS label that will show the inventory number, the profile number, and the gross weight of the container; and (3) the package certification label required by the NTSWAC. DOT labels and the NTS labels will be applied to containers on a shipment basis (8 containers). It is expected that all containers in a shipment will be labeled with their DOT and NTS labels within 24 hours of production and subsequently staged for shipment for about 1 to 2 days. The package certification label will be applied to containers not more than 24 hours before being loaded onto a trailer for shipment.

Action: The above text has been added to Section 4.1 of the RD/RA Package Introduction.

Specific Comments

5. Commenting Organization: U.S. EPA Commentor: Jablonowski
Section #: 2.1.4 of Process Description for Silo 3 Project
Page #: 2-2 Line #: NA
Original Specific Comment #: 1
Comment: In the paragraph labeled "Supply High Efficiency Particulate Air Filter (HEPA)," the last sentence states that "the filter also supplies sweep air to the Fines Collection Bins." It is not clear how an air filter can supply air. Typically, fans or blowers supply air. Air can also be supplied by gravity, provided that a powered exhaust is present. Air filters only remove particulates from an air stream. The text should be revised to clarify this matter.

Response: A pneumatic retrieval system suction line is also connected to the Fines Collection Bin. As air and material are exhausted from the bin by the pneumatic retrieval system, air is pulled from the supply air filter through the supply air piping to the bin.
Action: None required.

6. Commenting Organization: U.S. EPA Commentor: Jablonowski
Section #: 3.1.1 of Access and Retrieval Strategy for Silo 3 Project
Page #: 9 Line #: NA
Original Specific Comment #: 2
Comment: In the last bullet, the text indicates that tape will be applied to seal openings and secure wands to flexible boots. The type of tape to be used, however, is not specified. Typically, pipes or conduits installed through flexible boots are sealed using clamps, and the openings in the flexible boots are sized to accommodate the pipes or conduits that will be installed. Use of tape in this type of installation would be unusual. The text should be revised to address this issue.

Response: Heavy-duty duct tape is to be used. Based on preoperational trials, an additional clamp or other device may also be used.
Action: Preoperational trials of the vacuum tubing and flexible boots will be conducted to demonstrate adequate fastening.

7. Commenting Organization: U.S. EPA Commentor: Jablonowski
Section #: 3.2 of Access and Retrieval Strategy for Silo 3 Project
Page #: 11 Line #: NA
Original Specific Comment #: 3
Comment: The text states that two or more operators will operate the VWMS on the silo dome and that their activities will be guided by VWMS cameras and through radio communication with PRS operators in the Process Building. It is not clear how the cameras will aid the VWMS operators unless the monitors will be installed on top of the silo near the vacuum wands. The text should be revised to clarify the procedures for VWMS operation.
Response: See Section 6.0. During operation of the vacuum wands, camera monitors located near the silo dome manways will provide for operator viewing.
Action: None required.

OHIO EPA COMMENTS

General Comments:

1. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: na Pg #: na Line #: na Code: C
Original Comment #:
Comment: At the time of review of this document, the Silo 3 treatment facility construction is over 75% complete and procurement is 100% complete. Clearly any substantial design change recommended by Ohio EPA could/would not be considered at this time.
Response: During the development of the revised design reflected in the RD/RA package, DOE and Fluor Fernald have maintained the involvement of OEPA, USEPA and other stakeholders through frequent meetings, briefings, and other discussions. The intent of these efforts was to ensure that any substantial issues or comments would be identified and resolved prior to formal submittal of the Package.

Action: All comments or concerns resulting from OEPA and USEPA review of the RD/RA Package will be thoroughly evaluated and resolved. Any changes determined to be required to ensure protection of human health or the environment, or compliance with the Silo 3 remedy; ARARs and other applicable requirements will be appropriately addressed prior to proceeding with operation of the facility.

2. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: na Pg #: na Line #: na Code: C
Original Comment #:
Comment: The document does not include a waste management/transportation plan.

Response: Management of secondary waste is addressed in the Environmental Control plan and the Timed Estimate of Secondary Waste (RD/RA Package Sections 5.0 and 5.3, respectively). According to the current design and baseline operating schedule, a total of approximately 1910 soft-sided packages will be filled at an average rate of 15 packages per day, assuming 123 days of operation at 63% availability. The current Silo 3 project baseline assumes that the Silo 3 material will be transported by direct truck to the NTS for disposal. The current baseline assumes, eight soft-sided packages will be loaded into each enclosed truck trailer, with approximately 239 total shipments over a five-month period. Transportation and disposal of Silo 3 material will be specified in detail in the Transportation and Disposal Plan submitted in accordance with Section 4 of the RD/RA Package.

Action: The above text describing the current baseline approach for transportation and disposal has been added to Section 4 of the RD/RA Package Introduction.

3. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: na Pg #: na Line #: na Code: C

Original Comment #:
Comment: It appears that manual intervention will be utilized or may be needed during the operation of the Silo 3 project. Several times in document, DOE states that workers will be used to perform project-related tasks or in case of a malfunction. Ohio EPA is concerned that DOE is relying too much on human intervention in a radioactively contaminated environment.

Response: The project design has incorporated ALARA features to provide reasonable protection of workers. However, a fully automated process that totally eliminates manual intervention is not considered a reasonable project objective.
Action: None required.

4. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: na Pg #: na Line #: na Code: C
Original Comment #:
Comment: Please provide information regarding the excavator that has been selected. Visual information in the form of photos or videos would be helpful.

Response: Comment acknowledged.

Action: Photos of the excavator, and a video of the excavator demonstration conducted at Silo 4 during March 2003, are enclosed.